

Work Order ID 72846

Tuesday, August 16, 2011 10:50:28 AM



Item ID: D3234-1

Accept



Setup Start



Revision ID: U/R

Item Name: Doubler

Stop



Start Date: 8/16/2011 Start Qty: 1.00

Required Date: 8/16/2011 Req'd Qty: 1.00



Cust Item ID:

Customer:

PRELIMINARY ISSUE

Reference:

Approvals: Process Plan: *MP*

Date: *11-08-16*

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N)

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3234

pc1

100



Waterjet

FLOW WATER JET

Memo

FLOW CNC Waterjet

1-Cut as per Dwg D3234 ☐ Dwg Rev: *1* ☐ Prog Rev: *1* ☐ 2-
Debur if necessary

2024 .050

110



QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

120



QC

Quality Control

QC8- Inspect parts - second check

Memo

0.00

0.00

0.00

0.00

*- inspect to PC1
Dwg only
8/16/17*

11-8-17

11-8-17

(2)

(+2)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 72846

Tuesday, August 16, 2011 10:50:28 AM



Page 2

Item ID: D3234-1

Accept



Setup Start



Revision ID: U/R

Stop



Item Name: Doubler

Start Date: 8/16/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 8/16/2011 Req'd Qty: 1.00

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

130 Chemical Conversion Coat per QSI005 4.1 0.00



HandFinish

Memo

0.00

Hand Finishing

2x ϕ M-11/08/17

140 QC3- Inspect Part Finish 0.00



QC

Memo

0.00

Quality Control

2 ϕ M-11/08/17

Plo \rightarrow

150 Identify as per dwg & Stock Location: _____ 0.00



Packaging

Memo

0.00

Packaging

11/8/17 ϕ 20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: _____ Date: _____

Resolution: Scrap Disposition: Scrap QA: N/C Closed: _____ Date: _____






NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
u/u/25	#170	now at the C. Eng. Design change.	S u/u/25 057042	Scrap + Destroy Qty +2	S u/u/25	S u/u/25	S 057042 u/u/25	S u/u/25



NOTE: Date & initial all entries


Work Order ID 72846

Page 3

Tuesday, August 16, 2011 10:50:28 AM

Item ID: D3234-1 Accept  Setup Start 
Revision ID: U/R Stop 
Item Name: Doubler
Start Date: 8/16/2011 Start Qty: 1.00  Cust Item ID:
Required Date: 8/16/2011 Req'd Qty: 1.00  Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start 
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop 

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 	QC21- Final Inspection - Work Order Release	0.00							
QC Quality Control	Memo	0.00							

POSITIVE RECALL
EFFECTIVE _____ AUTH _____
RELEASED _____ DATE _____

MF
11-11-25

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Tuesday, August 16, 2011 10:50:25 AM

Page 1

Work Order ID: 72846

Parent Item: D3234-1

Parent Item Name: Doubler





Start Date: 8/16/2011

Required Date: 8/16/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev: A New Issue 08-08-14 JLM Verified By: EC
IPP Rev: B 08-12-18 as per ECN08-582 DD verified by: EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M2024T3S050 		Purchased	No			100	sf	97.4000	0.579	0.609474	1.5		
2024-T3-050 sheet													

11-8-17

Location

Loc Qty

Loc Code

MAT22

97.4

117684

97.4

117684

②

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 72846
Description: Doublee		Part Number: D3234-1
Inspection Dwg: D3234-1 Rev: U/R PC1		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☒ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
φ .098	+ .004 - .001	.099	✓		V Bo2	
.250	+/- .010	.247	2		V	
2.270	+/- .010	2.268	2		V	
2.747	+/- .010	2.747	✓		V	
.260	+/- .010	.264	2		V	
.300	+/- .010	.301	2		V	
2.627	+/- .010	2.629	2		V	
5.993	+/- .010	5.995	2		V	
7.108	+/- .010	7.142	2		V	
8.228	+/- .010	8.230	2		Prow302	
10.463	+/- .010	10.469	2		P	
10.77	+/- .030	10.77	✓		P	
2.225	+/- .030	2.249	2		V	
13.333	+/- .010	13.333	2		T B01	
15.365	+/- .010	15.365	✓		T	
15.665	+/- .010	15.668	2		T	
1.33	+/- .030	1.33	2		V	
2.739	+/- .010	2.741	2		V	
2.970	+/- .010	2.972	2		V	
3.168	+/- .010	3.170	2		V	
3.308	+/- .010	3.310	2		V	
4.553	+/- .010	4.550	✓		V	
.050	+/- .010	.050	2		V	

Measured by: RB	Audited by: S	Prototype Approval:
Date: 11-8-16	Date: 11/08/16	Date:

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	

8 7 6 5 4 3 2 1

D

D

C

962 371 970 383

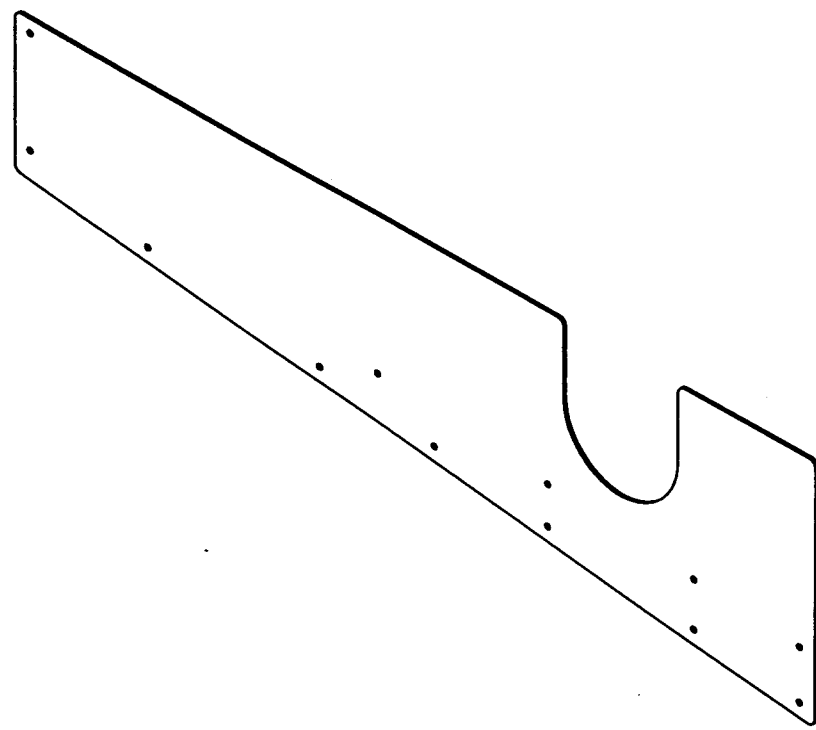
B

962 598 970 610

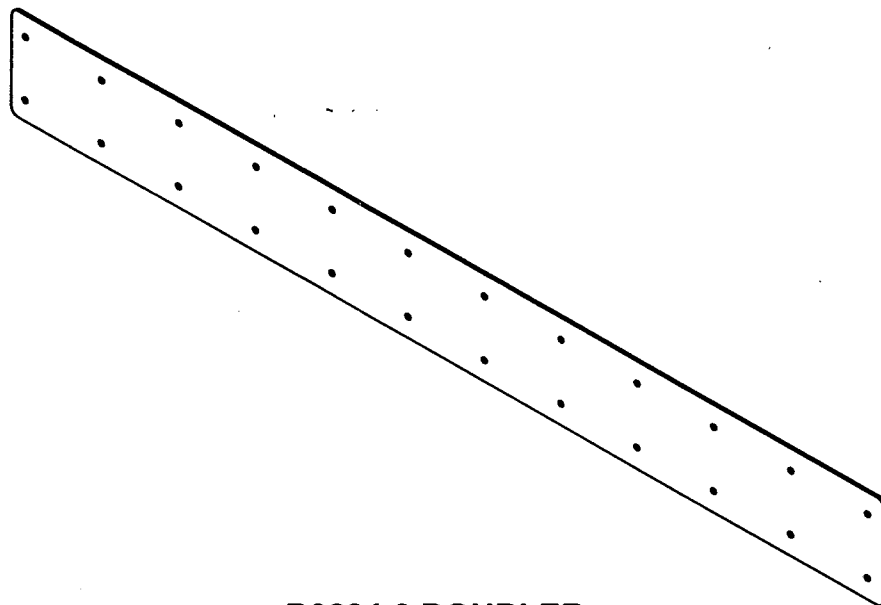
A

962 837 970 849

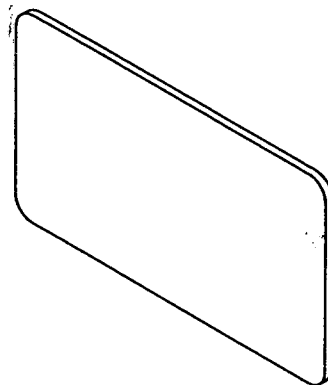
8 7 6 5 4 3 2 1



D3234-1 DOUBLER



D3234-3 DOUBLER



D3234-5 SPACER

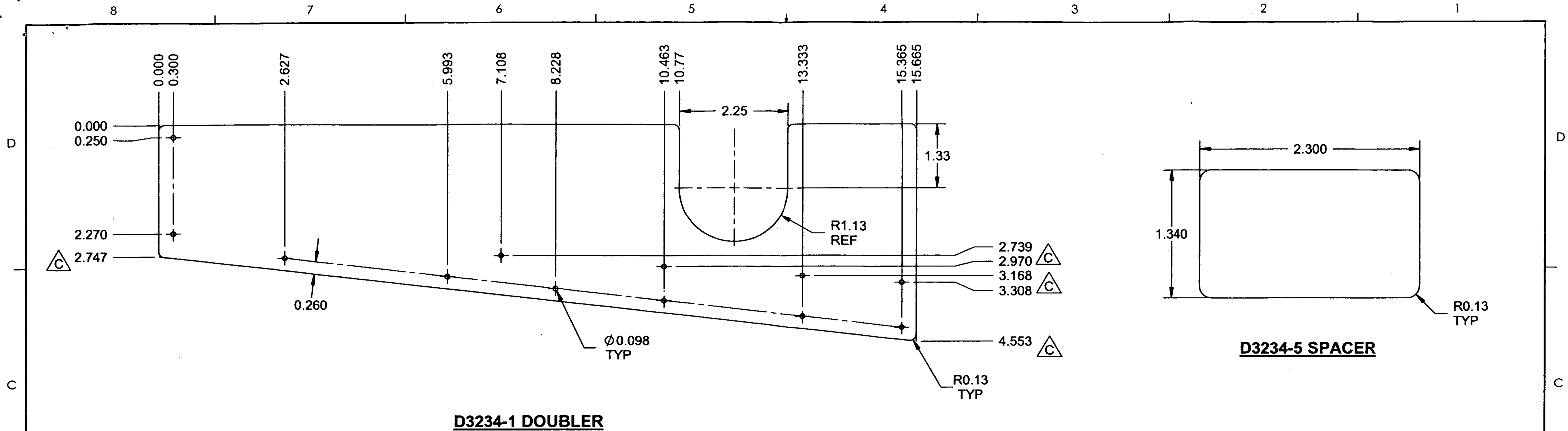
PRELIMINARY ISSUE
Rev PCI 11.08.15

- NOTES:
- 1) MATERIAL: -1 & -3: 2024-T3 ALUMINUM SHEET, 0.050 THICK
PER AMS-QQ-A-250/4 OR AMS 4037
REF DART SPEC M2024T3S.050
-5: 5052-H32 ALUMINUM SHEET, 0.050 THICK
PER AMS-QQ-A-250/8 OR AMS 4016
REF DART SPEC M5052H32S.050
 - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3234-X" USING FINE POINT PERMANENT INK MARKER
 - 7) WEIGHT: -1: 0.26 lbs
-3: 0.15 lbs
-5: 0.01 lbs

C	REDESIGN -1 TO MATCH D3025-1; 4.553 WAS 5.347 (C3-2), 2.747 WAS 2.841 (D8-2), REF. PAR 11:118	CP	11.08.15
B	REDRAWN IN SOLIDWORKS TO CURRENT DESIGN STANDARDS. PARTS FULLY DIMENSIONED. NO PHYSICAL CHANGES MADE TO PARTS REASON: REF PAR 08:029.	AJS	08.11.24
A	NEW ISSUE	CP	03.11.19
REV	DESCRIPTION	BY	DATE
DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	CP		
CHECKED	AS	DRAWING NO.	REV. 1
MFG APPR.	AS	D3234	SHEET 1 OF 2
APPROVED	MM	TITLE	SCALE
DE APPR.		DOUBLER	NTS
DATE	11.08.15	COPYRIGHT © 2003 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

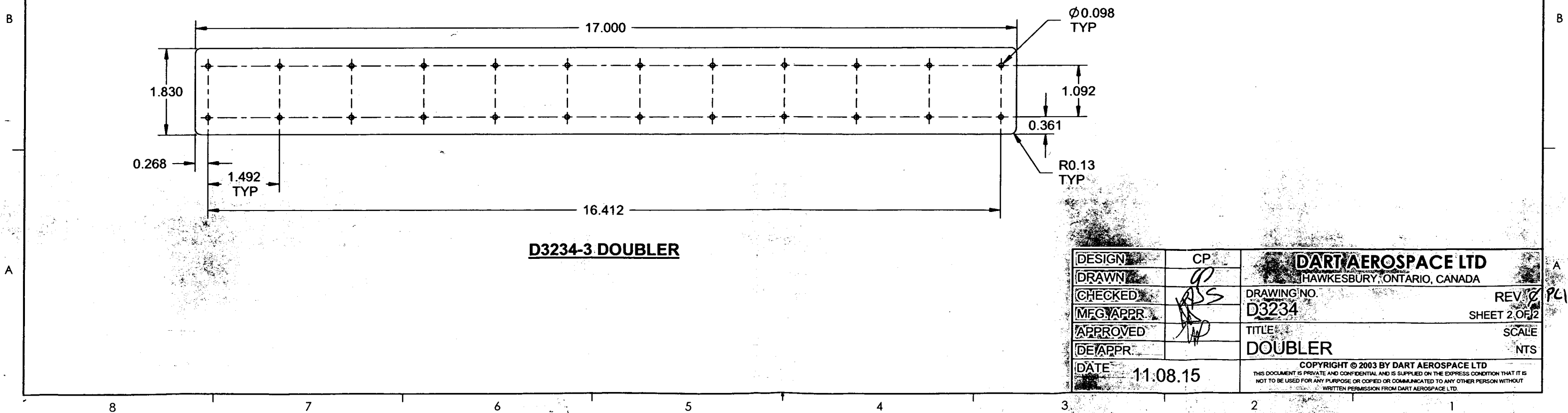
A

PCI



PRELIMINARY ISSUE

Rev. PCL 11.08.16



DESIGN	CP	DART AEROSPACE LTD	
DRAWN	CP	HAWKESBURY, ONTARIO, CANADA	
CHECKED	ASS	DRAWING NO.	REV. 2 PCL
MFG APPR		D3234	SHEET 2 OF 2
APPROVED		TITLE	SCALE
DET APPR		DOUBLER	NTS
DATE	11.08.15	COPYRIGHT © 2003 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			